

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (original) A method of interpolation for a complementary-color-filtered array image, comprising the steps of:

- (a) provide a complementary-color-filtered array of pixel values with yellow pixel values Y_e on a first subarray, cyan pixel values C_y on a second subarray, magenta pixel values M_g on a third subarray, and green pixel values G on a fourth subarray;
- (b) interpolating the subarray of yellow pixel values to form a yellow array;
- (c) interpolating the subarray of cyan pixel values to form a cyan array;
- (d) interpolating the subarray of magenta pixel values to form a magenta array;
- (e) interpolating the subarray of green pixel values to form a green array;
- (f) adjusting the color values for each pixel by
 - (i) subtracting a quantity $(Y_e + C_y - 2 \cdot G - M_g)/4$ from Y_e to generate the pixel's adjusted yellow value where Y_e is the pixel's yellow value from step (b), C_y is the pixel's cyan value from step (c), M_g is the pixel's magenta value from step (d), and G is the pixel's green value from step (e);
 - (ii) subtracting the quantity $(Y_e + C_y - 2 \cdot G - M_g)/4$ from C_y to generate the pixel's adjusted cyan value;
 - (iii) adding the quantity $(Y_e + C_y - 2 \cdot G - M_g)/4$ to M_g to generate the pixel's adjusted magenta value; and
 - (iv) adding the quantity $(Y_e + C_y - 2 \cdot G - M_g)/8$ to G to generate the pixel's adjusted green value.

Claim 2 (original) A method of interpolated complementary-color-filtered array image processing, comprising the steps of:

(a) provide an interpolated complementary-color-filtered array of pixel values with a pixel's yellow value denoted Y_e , cyan value denoted C_y , magenta value denoted M_g , and green value denoted G ;

(b) adjusting the color values for each pixel by

(i) subtracting a quantity $(Y_e + C_y - 2 \cdot G - M_g)/4$ from Y_e to generate the pixel's adjusted yellow value;

(ii) subtracting the quantity $(Y_e + C_y - 2 \cdot G - M_g)/4$ from C_y to generate the pixel's adjusted cyan value;

(iii) adding the quantity $(Y_e + C_y - 2 \cdot G - M_g)/4$ to M_g to generate the pixel's adjusted magenta value; and

(iv) adding the quantity $(Y_e + C_y - 2 \cdot G - M_g)/8$ to G to generate the pixel's adjusted green value.

Claim 3 (currently amended) An interpolator for complementary-color-filtered array image, comprising:

(a) a subarray-to-array interpolator for the color subarrays of a complementary-color-filtered array;

(b) a filter coupled to the output of the interpolator to adjust the interpolated colors at each pixel by adjusting with ~~an~~ a color imbalance factor for the pixel where said color imbalance factor relates to $G + M_g - Y_e - C_y$ with G the green value for said pixel, M_g the magenta value, Y_e the yellow value, and C_y the cyan value.

Claim 4 (previously presented) The interpolator of claim 3, wherein said subarray-to-array interpolator and said filter are implemented as a program on a programmable processor.